

APPLICABLE RULES AND STATUTES

37 CFR 1.56. DUTY OF DISCLOSURE - INFORMATION MATERIAL TO PATENTABILITY (Applicable Portion)

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentability defines, to make sure that any material information contained therein is disclosed to the Office.

Information relating to the following factual situations enumerated in 35 USC 102 and 103 may be considered material under 37 CFR 1.56(a).

35 U.S.C. 102. CONDITIONS FOR PATENTABILITY: NOVELTY AND LOSS OF RIGHT TO PATENT

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or
- (c) he has abandoned the invention, or
- (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraph (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or
- (f) he did not himself invent the subject matter sought to be patented, or
- (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

35 U.S.C. 103. CONDITIONS FOR PATENTABILITY; NON-OBVIOUS SUBJECT MATTER (Applicable Portion)

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 U.S.C. 112. SPECIFICATION (Applicable Portion)

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: I hereby appoint as my attorneys, with full powers of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith:

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2002년 5월 31일에 출원된 PCT 특허출원에서 찾을 수 있으며 이들 각각은 여기서 참고문헌으로 포함되어 있다. 제 1 카메라(52)는 헤드 어셈블리(24)에 장착되어 있다. 제 1 카메라(52)는 기판 어셈블리(26)상에 위치한 기판(53)에 관하여 헤드 어셈블리(24)를 위치시키는데 이용된다. 더욱 특별하게, 제 1 카메라(52)는 기준으로서 헤드(50)의 하나 이상의 노즐을 이용하여 미세 증착 헤드(50)를 정렬시키는데 이용된다. 더욱이, 제 1 카메라(52)는 기판상의 방울 분석을 수행하는데 이용되며 이는 아래에서 보다 완전히 설명될 것이다.

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레이저(60)는 최소한의 피처 크기를 감소시키기 위하여 적용된 유체 물질의 레이저 제거 및/또는 바이어스(vias)를 생성하는데 이용될 수 있다. 도 1에서 레이저(60)는 헤드 어셈블리(24)에 장착되는 한편, 레이저(60)는 헤드 어셈블리와는 독립적으로 이동하는 레이저 어셈블리상에 장착될 수도 있다. 유체 공급기(62)는 미세 증착 헤드(50)에 하나 이상의 도관(64)으로 연결된다. 유체 공급기(62)는 적색, 녹색 및

청색 픽셀용 폴리머-PPV, 용매, 저항성 있는(resistive) 유체물질, 전도성 유체물질, 레지스트(resist) 유체물질 및/또는 절연성 유체물질과 같은 하나 이상의 상이한 형태의 유체물질을 제공한다. 유체 공급기(62)는 새로운 유체 물질로 변경하기 이전에 용매 플러쉬(solvent flush)를 이용함으로써 공급된 유체 물질을 변경할 수 있는 것이 바람직하다.

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수평 위치 모터(64) 및 수평 위치 센서(66)는 헤드 어셈블리(24)에 대해 기판 어셈블리(26)를 위치시키는데 이용된다. 바람직한 실시예에서, 수평 위치 모터(40)는 제 1 축을 따라 이동한다. 수평 위치 모터(64)는 제 1 축과 직각을 이루는 제 2 축

